

ABSTRACT

SILANE COMPOSITIONS AND METHODS FOR BONDING RUBBER TO METALS

Compositions and methods for treating metal substrates and/or bonding metal substrates to polymeric materials, such as rubber, are provided. The compositions include at least one substantially hydrolyzed amino silane and at least one substantially hydrolyzed sulfur-containing silane. Optionally, 5 the compositions include a nano-size particulate material. The compositions provide coatings on metal substrates for protecting the metal from corrosion and for adhering rubber-like polymeric compositions to the metal with polymer-to-metal vulcanization conditions less dependent on the coating thickness, and with use of less coating materials.

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